

REMARKS

Claims 1-6, 9-12 and 14-16 are presented for consideration, with claims 1, 11, 12, 14 and 16 being independent.

The independent claims have been amended to further distinguish Applicant's invention from the cited art.

Claims 1-5, 9-12 and 14-16 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Yuan et al. '417. In addition, claim 6 is rejected under 35 U.S.C. § 103 as allegedly being obvious over Yuan et al. These rejections are respectfully traversed.

Applicant's invention as set forth in claim 1 relates to a positioning apparatus comprised of a movable member movable in a first direction, and an electromagnet unit configured and positioned to drive the movable member in the first direction. The electromagnet unit comprises a first electromagnet and a second electromagnet positioned away from the first electromagnet in a second direction which is perpendicular to the first direction. Each of the first electromagnet and the second electromagnet is controlled to generate a magnetic flux having an inverted polarity with respect to the other. As amended, the first electromagnet and the second electromagnet are positioned at the same side of a movable member, and a leakage flux of the first electromagnet is canceled by a leakage flux having the inverted polarity of the second electromagnet, and a suction power generated by the first electromagnet and a suction power generated by the second electromagnet are applied to drive the movable member in a same direction.

Support for the amendments to claim 1 can be found, for example, in Figure 2A and the accompanying specification beginning on page 7, line 24. In accordance with Applicant's claimed invention, a high performance positioning apparatus can be provided.

The Yuan et al. patent relates to a fine stage control system for controlling the stage by the use of two electromagnets 42, 52. As shown in Figure 2, electromagnet 42 is disposed to generate a driving force in an opposite direction to a driving force generated by electromagnet 52. Driving forces generated by the electromagnets drive a stage 30 in an X(+) or an X(-) direction.

In contrast to Applicant's claimed invention, however, Yuan et al. is not read to teach or suggest, among other features, first and second electromagnets positioned at a same side of a movable member, with a leakage flux of the first electromagnet canceled by a leakage flux having the inverted polarity of the second electromagnet, and a suction power generated by the first electromagnet and a suction power generated by the second electromagnet applied to drive the movable member in a same direction.

The other independent claims, *i.e.*, claims 11, 12, 14 and 16, have been amended substantially along the same lines as claim 1, and thus are submitted to be allowable for at least the same reasons.

Accordingly, reconsideration and withdrawal of the rejections of the claims under 35 U.S.C. § 102 and § 103 are deemed to be in order and such action is respectfully requested.

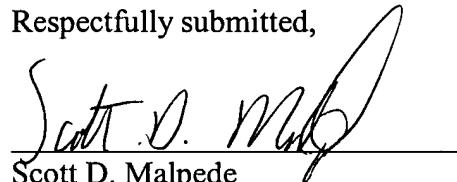
Therefore, it is submitted that Applicant's invention as set forth in independent claims 1, 11, 12, 14 and 16 is patentable over the cited art. In addition, dependent claims 2-6, 9, 10 and 15

set forth additional features of Applicant's invention. Independent consideration of the dependent claims is respectfully requested.

Applicant submits that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are also requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



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